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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/486,981	02/28/2000	IZUO AOKI	157679	7006
24040	7590	12/06/2005	EXAMINER	
DENNIS G. LAPOINTE LAPOINTE LAW GROUP, PL PO BOX 1294 TARPON SPRINGS, FL 34688-1294			PRICE, ELVIS O	
			ART UNIT	PAPER NUMBER
			1621	

DATE MAILED: 12/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/486,981	<b>Applicant(s)</b> AOKI ET AL.	
	<b>Examiner</b> Elvis O. Price	<b>Art Unit</b> 1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-4, 12-19 and 28-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 12-19 and 28-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Claims 1-4, 12-19 and 28-31 are pending in the application.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 2 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Toan et al. {US Pat. 5,509,957}.

Toan et al. disclose the presently claimed molecular compounds (see Col. 4 and 5, Compound Numbers: 1, 3, 4, 6, 7, 9, 15 and 19-24).

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Hisao et al. {JP-08-133910; see English translation}.

Hisao et al. disclose the presently claimed molecular compounds as defined by the present claim 1 (see abstract; sections [0010], [0017 to 0024])

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1621

Claims 2-4, 12-19 and 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toan et al. {US Pat. 5,509,957}, in view of Klemm et al. {EP 29990 A1; see English abstract}.

Applicants claim molecular compounds, defined by the phenol derivatives of formulas I, IV, V and VI, wherein the molecular compounds are selected from the group consisting of hydrates, solvates, adducts and clathrate compounds. Applicants further claim the said molecular compound(s) contains, as constituents, a material that reacts with the phenol derivative to form the said molecular compound selected from the group consisting of antibacterial agents, antifungal agents, insecticides, noxious insect repellants, perfumes, deodorants, antifouling agents, curing agents for coating materials, accelerators for coating materials, resins, adhesives, natural essential oils, antioxidants, vulcanization accelerators and organic solvents.

Toan et al. teach water-soluble molecular compounds of formulas I and II, derived from phenol compounds, which encompass the presently claimed molecular compounds (see Col. 1, lines 19-65). Toan et al. teach that their water-soluble molecular compounds can be combined with a material that reacts with the phenol compounds to form the said molecular compound(s). The difference between the presently claimed invention and what is taught by the Toan et al. reference is that the Toan et al. reference does not explicitly teach molecular compounds selected from the group consisting of antibacterial agents, antifungal agents, insecticides, noxious insect repellants, perfumes, deodorants, antifouling agents, curing agents for coating materials, accelerators for coating materials, resins, adhesives, natural essential oils,

antioxidants, vulcanization accelerators or organic solvents. However, Toan et al. teach that the molecular compounds are water-soluble and can be used as agents for coating materials (see Col. 4, lines 41-44 and Col. 7, lines 66-67 thru Col. 8, lines 1-3).

Additionally, Klemm et al. teach a molecular compound (i.e., 2,2'-dihydroxy-5,5'-methylene di-(para-toluenesulphonic acid)), which is encompassed by the presently claimed formulas IV and formula II of the Toan et al. reference (see first paragraph of English abstract: compound I). Klemm et al. further teach that their molecular compound and its salts have, inter-alia, astringent, bactericidal, and fungicidal properties (see beginning of second paragraph of English abstract).

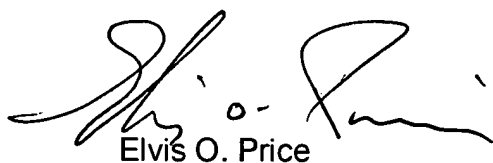
It would have been prima facie obvious to one having ordinary skill in the art, in view of the Toan et al. and Klemm et al. references, to arrive at the presently claimed invention because Toan et al. teach water-soluble molecular compounds that encompass the presently claimed compounds and both Toan et al. and Klemm et al. teach that such molecular compounds can be used as agents for coating materials or used as astringent, bactericidal and/or fungicidal agents.

One having ordinary skill in the art would have been motivated, in view of the Toan et al. and Klemm et al. references, to obtain any and all possible molecular compounds (including positional isomers) encompassed by formulas I and/or II taught by the Toan et al. invention so as to utilize the molecular compounds and their salts as agents for coating materials or as astringent, bactericidal and/or fungicidal agents (as taught by Klemm et al.). Thus, the presently claimed invention would have been obvious to one having ordinary skill in the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elvis O. Price whose telephone number is 571 272-0644. The examiner can normally be reached on 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann R. Richter can be reached on 571 272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Elvis O. Price

December 4, 2005